

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventors

Brown et al.

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For

Recovery of Metal Values

Examiner

Miller, E.

Art Unit

2204

Assistant Commissioner for Patents

Washington, DC 20231



Sir:

This paper is being filed in response to the Restriction Requirement mailed July 10, 2000 in the above-identified application.

Amendment

Please amend claim 22 as follows:

22. (Amended) A process for selectively extracting a scandium metal value from an ore residue from a tantalum production process which includes fluorine, scandium and one or more solubilizable metal values, the solubilizable metal values including tantalum or niobium metal values, the process comprising:

separating and removing fluorine values from the ore residue by reacting the ore residue with a sulfuric acid solution to colubilize at least a portion of the tantalum or niobium metal values from the ore residue and produce an undissolved material;

separating the undissolved material;

reacting the undissolved material with sulfuric acid for a period of time, and under temperature and pressure conditions sufficient to liberate hydrogen fluoride gas and to generate a sulfated material;

leaching the sulfated material in water to solubilize at least a portion of the scandium metal values contained therein and generate an aqueous solution comprising said solubilized scandium metal values and a solid phase at least partially depleted in the scandium solubilized metal values;

contacting the aqueous solution with a organic medium comprising DEHPA, TBP and TDA in a diluent to generate an organic phase comprising scandium metal values;

selectively extracting solubilized scandium metal values from said <u>organic phase</u> [aqueous solution] by contacting said <u>organic phase</u> [aqueous solution] with a sodium hydroxide stripping agent to produce a solid phase comprising scandium metal values and separating the solid phase from the remaining <u>organic phase</u> [aqueous solution];

and drying and recovering the scandium metal values.

Current Status

Claims 3-22 are currently pending in the application. Applicants are being required to perfect their election of a single disclosed species for further prosecution in the present application, and to list all claims readable thereon.

Election

Applicants hereby confirm their election of the process for selectively extracting scandium metal values as disclosed in the Example of the present Specification (pages 15-17). This embodiment of the present invention is described in new claim 22 set forth above. The elected species has the following characteristics:

Metal Value

Scandium

Source Material

ore residue from tantalum/niobium production process

First Acid

sulfuric acid

Second Acid

sulfuric acid

Leaching Agent

water

Organic Medium

DEHPA, TBP, TDA in a diluent

Stripping Agent

sodium hydroxide

Applicants respectfully submit that claim 22 reads on the species. Claims 5 and 7-21 are generic.

Conclusion

A favorable Office Action is respectfully solicited. The Examiner is invited to contact the undersigned at 336.607.7315 to discuss any matter relating to this application.

Respectfully submitted,

Date: 9/11/00

By:

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